

## **DIAPHRAGM SUSPENSION ASSEMBLY FOR LOUDSPEAKER TRANSDUCERS**

### **ABSTRACT**

This invention provides a transducer having at least two surrounds supporting a cylinder. With at least two surrounds, the transducer may handle more power. This increased power may be used to drive the voice coil that is wrapped around the cylinder enabling a greater excursion range of the diaphragm. With a greater excursion range, the transducer may operate at low frequency as well as mid to high frequencies. The two surrounds may also be coupled to the cylinder increasing stability of the cylinder. With the two suspensions stabilizing the cylinder, the side-to-side movement of the cylinder may be reduced minimizing the chance of the voice coil short-circuiting with the other electrical and/or mechanical circuits in the transducer. In addition, the cylinder made a substantially rigid material may better support the two flexible surrounds so that the two surrounds do not induce wobbling in the diaphragm.